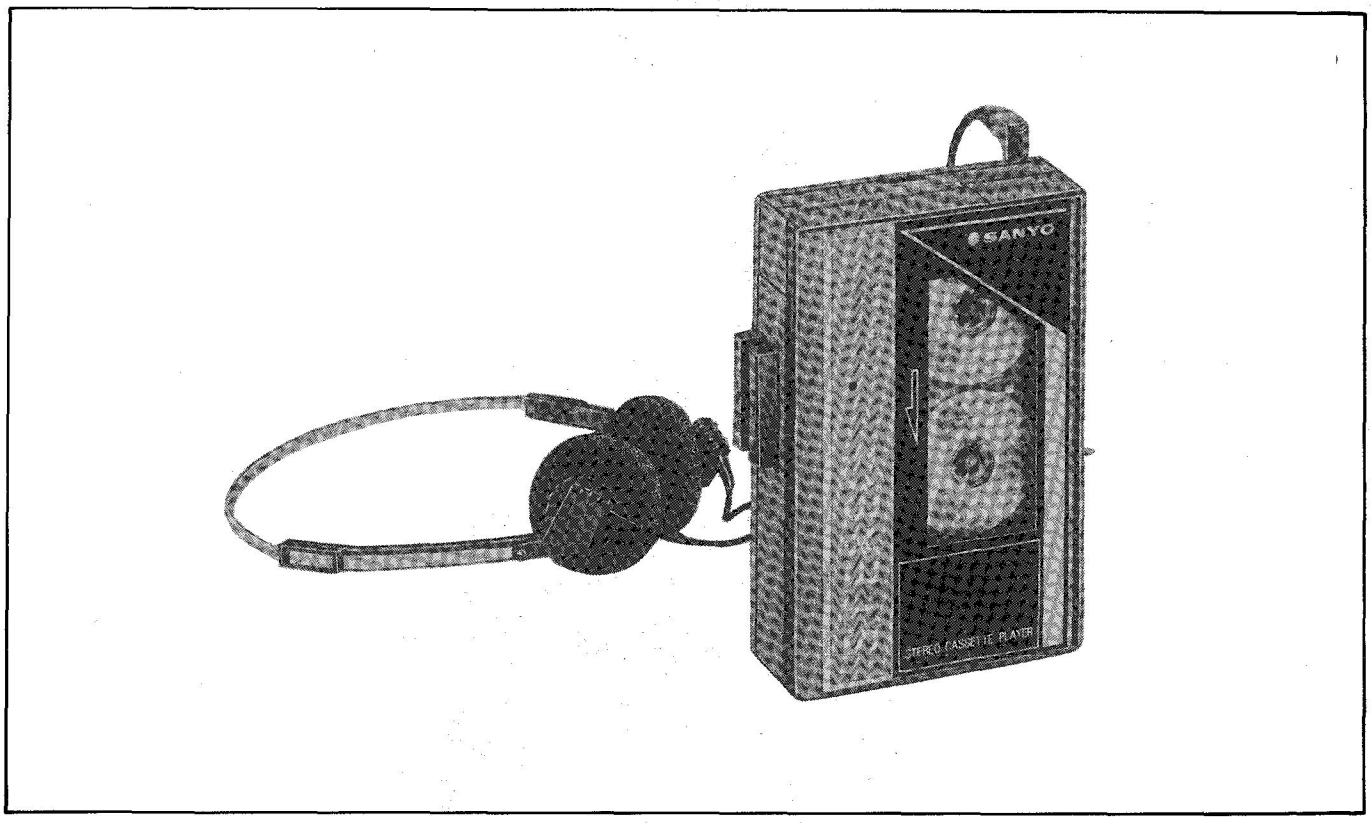
SERVICE MANUAL

STEREO CASSETTE PLAYER

SANYO

M GP9

(EUROPE/CANADA)

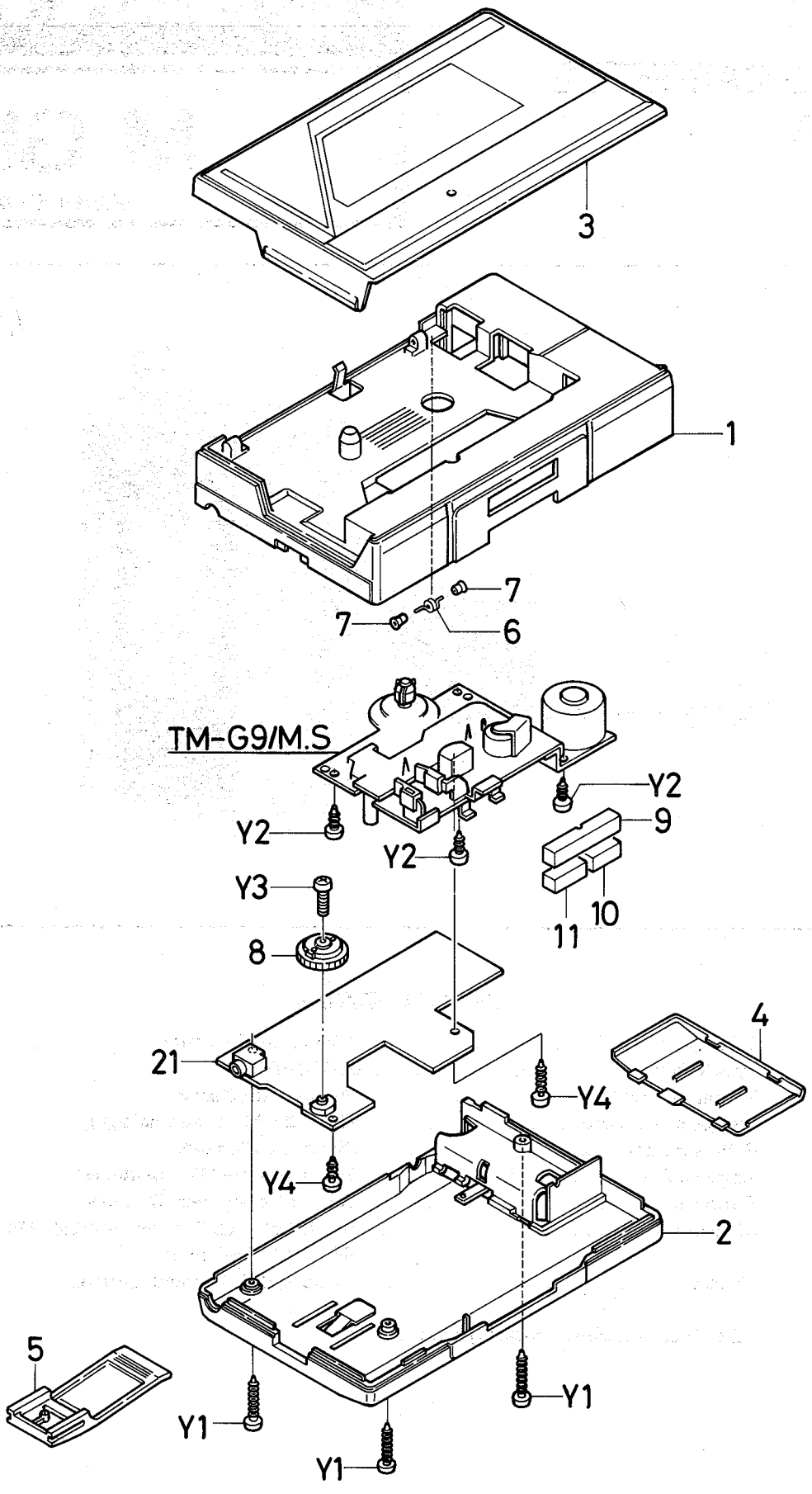


SPECIFICATIONS

Tape speed	1-7/8 ips. (4.75 cm/sec.)
Wow & flutter	0.3% WRMS
Output power	20 mW max./channel
Frequency response	63 – 13,000 Hz (Normal tape)
F. forward time	250 sec. (C-60 tape)
Power source	DC: 4.5 (3 size "AA" batteries)
Terminals	Output: Headphones 32 ohms
Dimensions	3-7/16"(W) x5-5/32" (H) x1-7/16" (D) (87 x 131 x35.4 mm)
Weight	7.4 ozs. (210g) without batteries

*Specifications subject to change without notice.

CABINET EXPLODED VIEW



PARTS LIST

NOTE:

* Materials of Capacitors and Resistors are abbreviated as follows;

AL ELECT .....Aluminum Electrolytic
BC CON .....Semiconductor Ceramic
CHIP BC .....Chip Semiconductor Ceramic
CHIP TAN .....Chip Tantal
ELECT .....Electrolytic
PP CON .....Polypropylene
MT GLAZE .....Metal Glaze
FP CARBON .....Flameproof Carbon

* Tolerance of Capacitors and Resistors are noted with follow symboles;

J .....±5%
K .....±10%
M .....±20%
N .....±30%
P .....+ 100 − 0%
Q .....+ 30 − 10%
Z .....+ 80 − 20%

This models are 2 version and 3 kind of color.

PACKING & ACCESSORIES

Ref. No.	Part No.	Description
	141-6-141T-26801	DISPLAY CARTON (CANADA)
	141-6-141T-25702	DISPLAY CARTON (EUROPE)
	141-6-145T-15700	FOAM PLASTIC CASE
	141-6-318T-09600	PAD, FOAM PLASTIC CASE
	141-6-318T-06900	PAD, FOAM PLASTIC CASE
	141-6-231T-15250	INNER POLYE COVER, SET HEADPHONE
	141-6-409T-33602	INST MANUAL (EUROPE)
	4-152T-08001	HEADPHONE ASSY (EUROPE)
	4-152T-07401	HEADPHONE ASSY (CANADA)
	141-6-409T-33606	INST MANUAL (CANADA)

CABINET & CHASSIS

Ref. No.	Part No.	Description
1	141-0-111T-69400	CABINET ASSY
2	141-0-126T-56902	BACK LID ASSY (BLACK/EUROPE)
	141-0-126T-56932	BACK LID ASSY (SILVER/EUROPE)
	141-0-126T-56942	BACK LID ASSY (RED/EUROPE)
	141-0-126T-56964	BACK LID ASSY (CANADA)
3	141-0-124T-51200	TOP LID ASSY (BLACK/EUROPE,CANADA)
	141-0-124T-51201	TOP LID ASSY (SILVER/EUROPE)
	141-0-124T-51205	TOP LID ASSY (RED/EUROPE)
4	141-2-128T-24000	BATTERY LID (BLACK/EUROPE,CANADA)
	141-2-128T-24001	BATTERY LID (RED/EUROPE)
	141-2-128T-24090	BATTERY LID (SILVER/EUROPE)
5	141-2-210T-66801	BRACKET, BELT CRIP
6	141-2-856T-60300	SPRING COIL, TOP LID
7	141-2-430T-01800	EYELET 1.6X3, SPRING COIL
8	141-2-163T-93501	ROTARY KNOB, VOLUME (CANADA)
	141-2-163T-93502	ROTARY KNOB, VOLUME (EUROPE)
9	141-2-160T-72300	PUSH BUTTON, PLAY
10	141-2-160T-72400	PUSH BUTTON, FWD
11	141-2-160T-72500	PUSH BUTTON, STOP

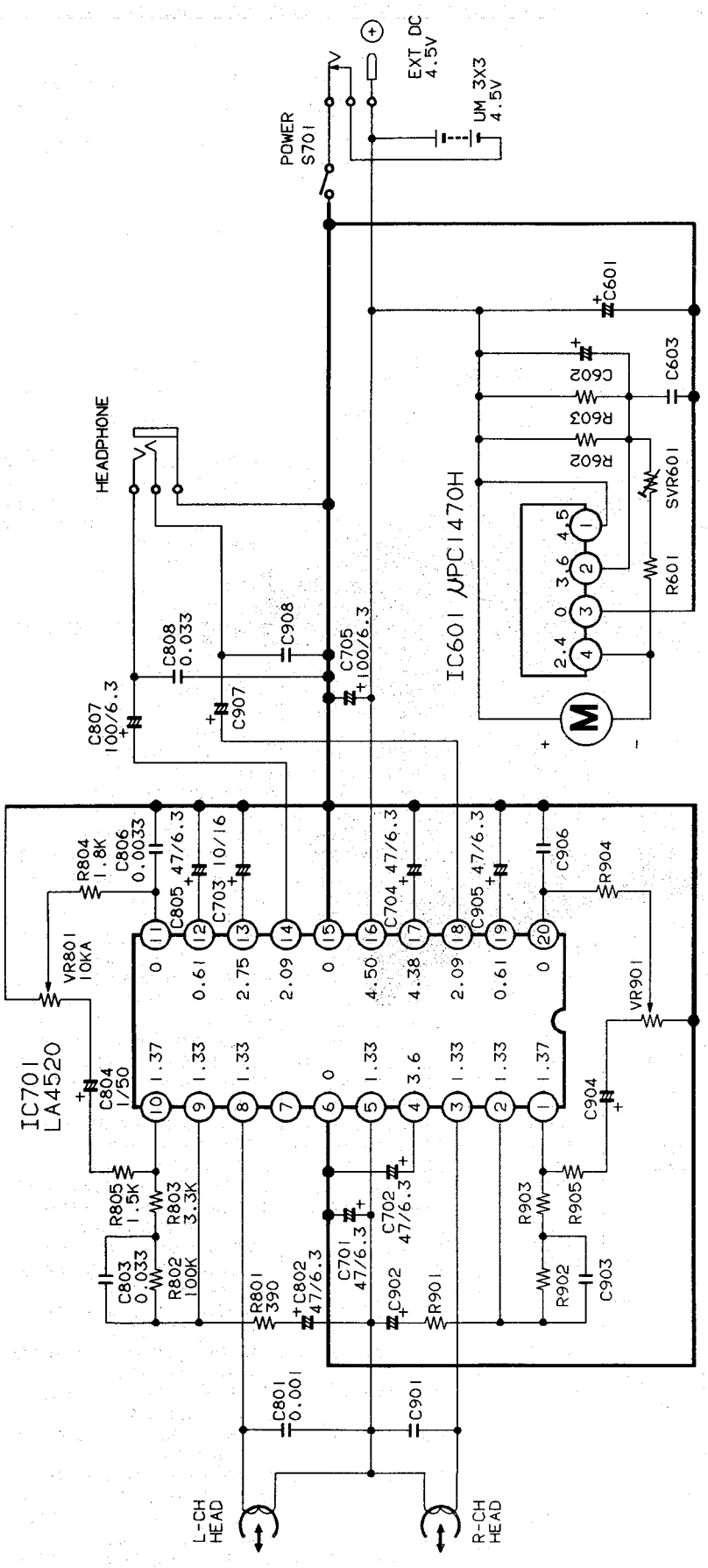
FIXING PARTS

Ref. No.	Part No.	Description
71	BJN2S2R312+Z1	PAN HD 2 TAPPING SCREW 2.3X12, CABI-BACK (3PC'S)
72	BJN2S2R3+6+Z1	PAN HD 2 TAPPING SCREW 2.3X6, MECHA-CABI (3PC'S)
73	BS3NS1R7+5+Z1	PAN HD 3 SPECIAL SCREW 1.7X5, VOLUME KNOB
74	BJN2S2R3+6+Z1	PAN HD 2 TAPPING SCREW 2.3X6, PCB (2PC'S)

* * * P.C.B. ASSY * * *

Ref. No.	Part No.	Description
21	141-4-285T-51200	P.C BOARD ASSY, AMP (EUROPE)
	141-4-285T-51201	P.C BOARD ASSY, AMP (EUROPE)
	141-4-285T-51202	P.C BOARD ASSY, AMP (CANADA)
	141-4-285T-51203	P.C BOARD ASSY, AMP (CANADA)
	4-235T-93371	SOCKET, EXT.DC
	4-240T-30372	SOCKET, HEADPHONE
S701	4-248T-13500	SWITCH
VR801,901	4-220T-36700	V.R, VOLUME
SVR601	4-222T-85871	SEMI VR 500B, SPEED CONTROL
IC601	SIUPC1470H+++	IC UPC1470H SIP4
IC701	SILA4520+++++	IC LA4520 DIP20
C601	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C602	CE+16106MY++S	ELECT 10MF 16V M Y (141-4-285T-51201)
C701	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C702	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C703	CE+16106MY++S	ELECT 10MF 16V M Y
C704	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C705	CE6R3107MY++S	ELECT 100MF 6.3V M Y
C801	CC+50102KAYB+	CERAMIC 0.001MF 50V K A YB
or	CC+50102KDYBS	CERAMIC 0.001MF 50V K D YB
C802	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C803	CB+25333KDXRS	BC CON 0.033MF 25V K D XR
C804	CE+50105MY++S	ELECT 1MF 50V M Y
C805	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C806	CB+25332MAXR+	BC CON 0.0033MF 25V M A XR
or	CB+25332MDXRS	BC CON 0.0033MF 25V M D XR
C807	CE6R3107MY++S	ELECT 100MF 6.3V M Y
C808	CB+16223NA+Y+	BC CON 0.022MF 16V N A Y
C901	CC+50102KAYB+	CERAMIC 0.001MF 50V K A YB
or	CC+50102KDYBS	CERAMIC 0.001MF 50V K D YB
C902	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C903	CB+25333KDXRS	BC CON 0.033MF 25V K D XR
C904	CE+50105MY++S	ELECT 1MF 50V M Y
C905	CE6R3476MY++S	ELECT 47MF 6.3V M Y
C906	CB+25332MAXR+	BC CON 0.0033MF 25V M A XR
or	CB+25332MDXRS	BC CON 0.0033MF 25V M D XR
C907	CE6R3107MY++S	ELECT 100MF 6.3V M Y
C908	CB+16223NA+Y+	BC CON 0.022MF 16V N A Y
R601	RC/+4101KT++R	CARBON T 100 OHM K1/4WR25 (141-4-285T-51201)
	RC/+4271KT++R	CARBON T 270 OHM K1/4WR25 (141-4-285T-51200)
R602	RC/+4271KP++R	CARBON P 270 OHM K1/4WR25 (141-4-285T-51201)
	RC/+4272KT++R	CARBON T 2.7KOHM K1/4WR25 (141-4-285T-51200)
	RC/+4331KP++R	CARBON P 330 OHM K1/4WR25 (141-4-285T-51201)
	RC/+4391KP++R	CARBON P 390 OHM K1/4WR25 (141-4-285T-51201)
R603	RC/+4111KT++R	CARBON T 110 OHM K1/4WR25 (141-4-285T-51200)
	RC/+4181KT++R	CARBON T 180 OHM K1/4WR25 (141-4-285T-51201)

SCHEMATIC DIAGRAM

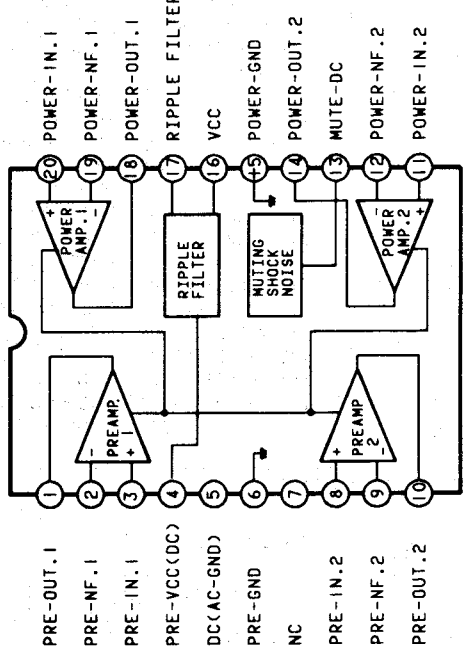


PCB to be used must differ with kinds of motors. (See page 6)

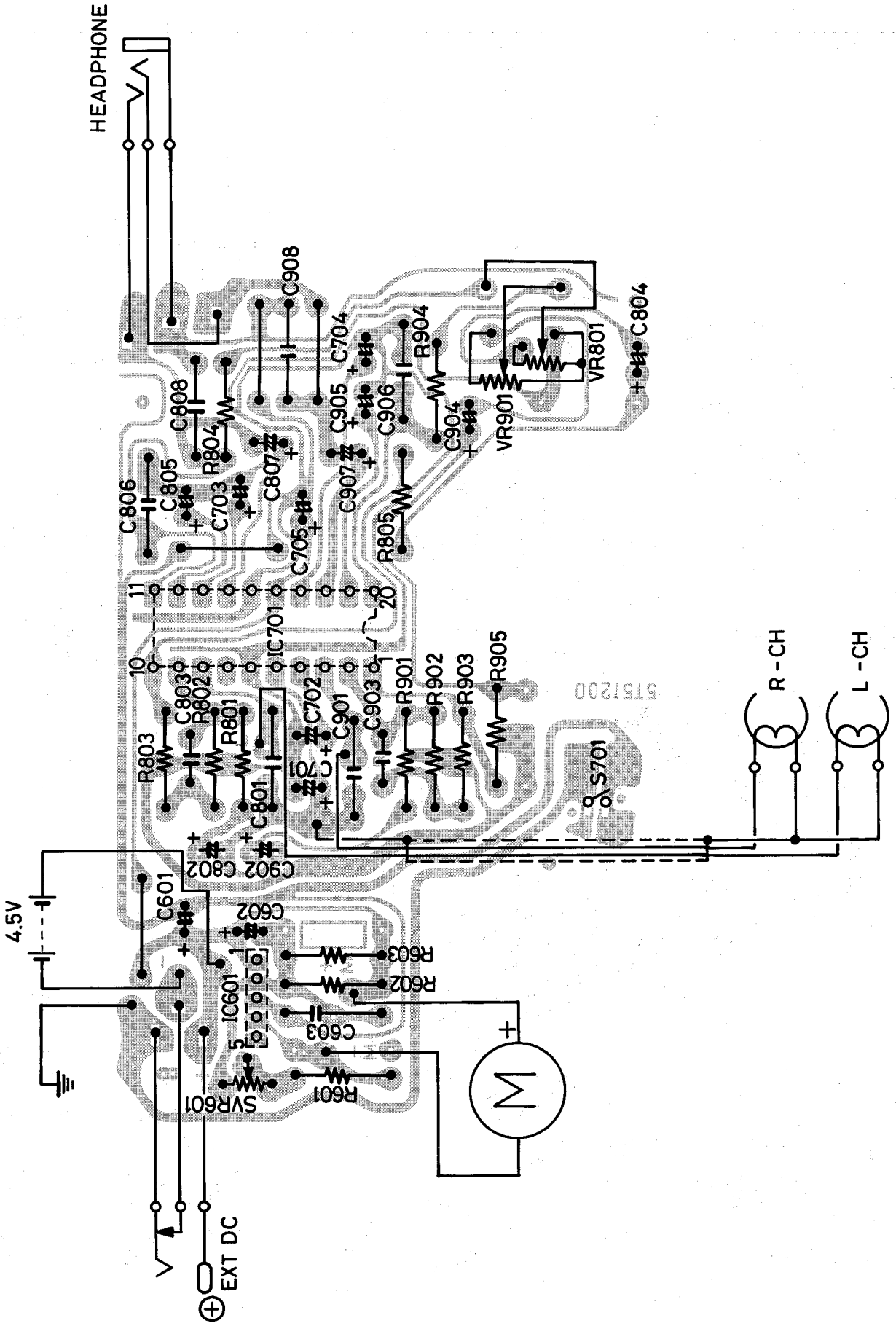
	141-4-280T 51200.02	141-280T 51201.03
SVR601	500B	500B
C601	47μ/6.3	47μ/6.3
C602	BLANK	10μ/16
C603	BLANK	BLANK
R601	270	100
R602	2.7K	*
R603	110	180
MOTOR TM-GP9	M	S

* 270 OR 330 OR 390

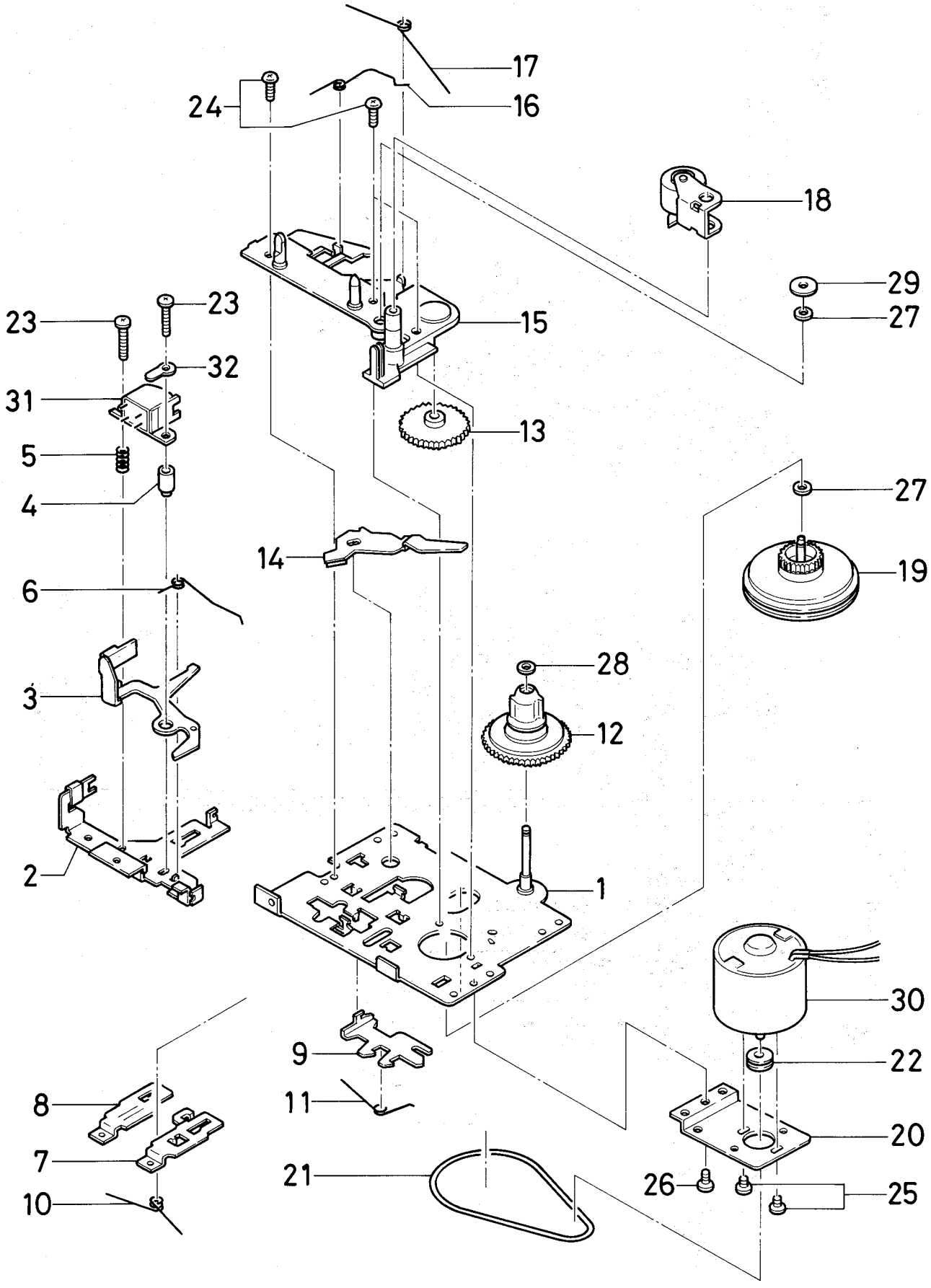
IC701 LA4520 (AF PRE-AMPLIFIER)



WIRING DIAGRAM



EXPLODED VIEW (MECHANISM)



PARTS LIST

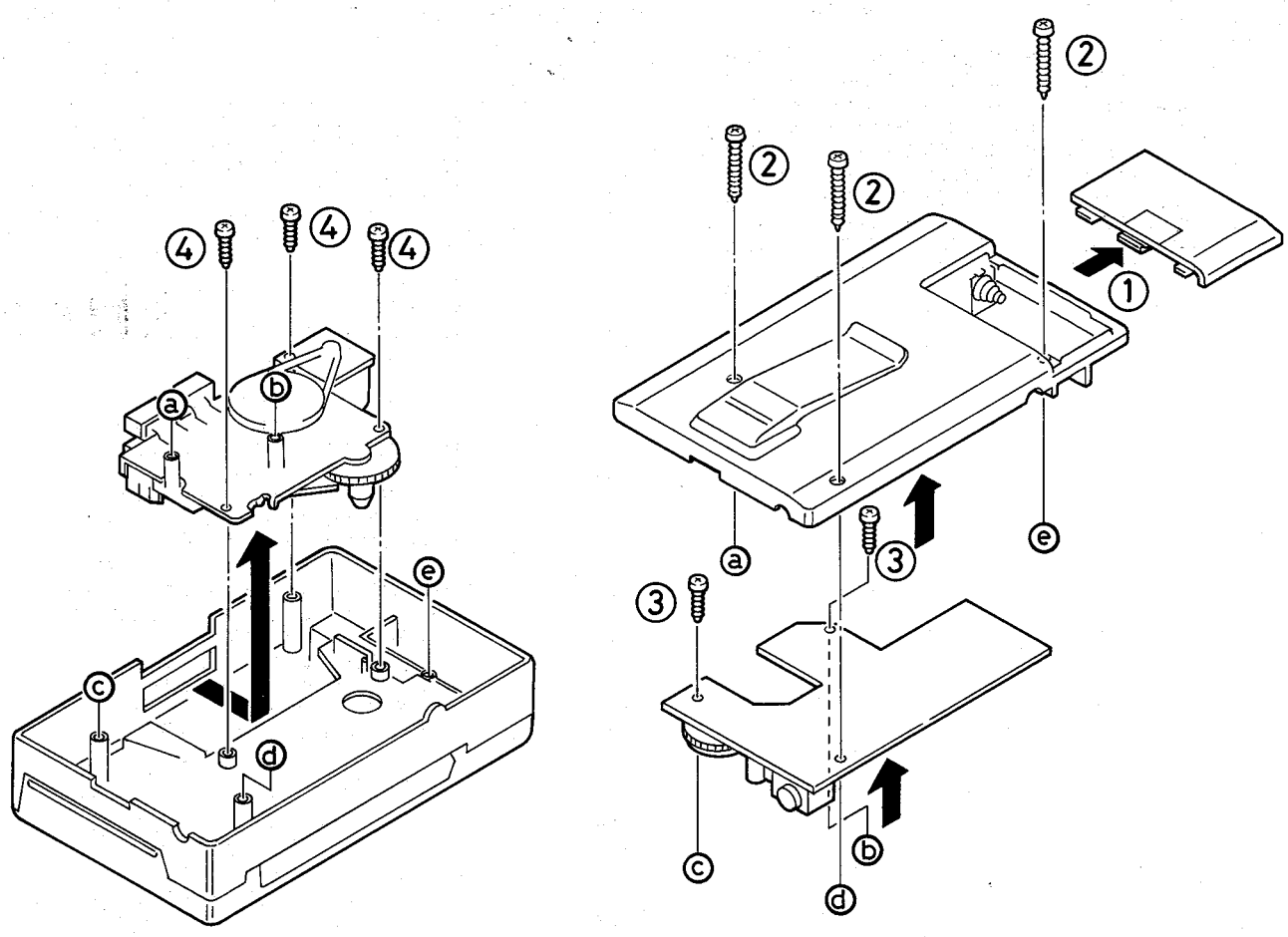
Ref. No.	Part No.	Description
R801	RC/+4391KT++R	CARBON T 390 OHM K1/4WR25
R802	RC/+4104KT++R	CARBON T 100KOHM K1/4WR25
R803	RC/+4332KT++R	CARBON T 3.3KOHM K1/4WR25
R804	RC/+4182KT++R	CARBON T 1.8KOHM K1/4WR25
R805	RC/+4152KT++R	CARBON T 1.5KOHM K1/4WR25
R901	RC/+4391KT++R	CARBON T 390 OHM K1/4WR25
R902	RC/+4104KT++R	CARBON T 100KOHM K1/4WR25
R903	RC/+4332KT++R	CARBON T 3.3KOHM K1/4WR25
R904	RC/+4182KT++R	CARBON T 1.8KOHM K1/4WR25
R905	RC/+4152KT++R	CARBON T 1.5KOHM K1/4WR25

MECHANISM (TM-G9S,TM-G9M)

These mechanism is 2 kind version. Same mechanism except MOTOR.

Ref. No.	Part No.	Description
1	141-0-311T-53900	CHASSIS ASSY
2	141-0-732T-43100	SLIDE ASSY, HEAD SLIDE
3	141-0-740T-45700	LEVER ASSY
4	141-2-461T-52200	PIPE, HEAD BASE
5	141-2-856T-62700	SPRING COIL, HEAD AZIMUTH
6	141-2-856T-62800	SPRING COIL, PINCH ROLLER PRESSURE
7	141-2-732T-42900	SLIDE, F.FWD
8	141-2-732T-43000	SLIDE, STOP
9	141-2-732T-42800	SLIDE, LOCK
10	141-2-860T-11300	SPRING WIRE, SLIDE (7.8) RETURN
11	141-2-860T-11400	SPRING WIRE, SLIDE (9) RETURN
12	141-0-532T-07500	REEL GUIDE ASSY
13	141-2-581T-48200	GEAR, FWD
14	141-2-740T-45600	LEVER, FLYWHEEL KICK
15	141-0-312T-19600	SUB CHASISS ASSY
16	141-2-860T-11100	SPRING WIRE, LEVER (14) RETURN
17	141-2-860T-11200	SPRING WIRE, HEAD BASE
18	141-0-545T-11100	LEVER PINCH ROLLER ASSY
19	141-0-521T-17200	FLYWHEEL ASSY
20	141-2-378T-19200	BRACKET, MOTOR
21	141-2-564T-41600	SQUARE BELT
22	141-2-661T-82700	PULLEY, MOTOR
23	141-2-421T-62400	SPECIAL SCREW, HEAD MTG. (2PC'S)
24	141-2-421T-62500	SPECIAL SCREW, CASSETTE GUIDE (2PC'S)
25	141-2-421T-62700	SPECIAL SCREW, MOTOR MTG. (2PC'S)
26	141-2-421T-64900	SPECIAL SCREW, MOTOR BRACKET (20)
27	141-2-457T-51900	SPECIAL WASHER, FLYWHEEL THRUST (2PC'S)
28	141-2-457T-52000	SPECIAL WASHER, REEL
29	141-2-457T-53500	SPECIAL WASHER, FLYWHEEL
30	4-527T-28200	COMMUTATE MOTOR (TM-G9S)
or	4-527T-28251	┌COMMUTATE MOTOR (TM-G9M)
	EWVM28+YAW+RE	├VINYL WIRE RE
	EWVM28+YAW+BK	└VINYL WIRE BK
31	4-242T-35200	MAGNETIC HEAD, PLAY
32	141-2-472T-00200	LUG, HEAD GND.

DISASSEMBLY INSTRUCTIONS



ADJUSTMENTS

STANDARDS OF THE TAPE MECHANISM

All necessary adjustments to maintain the sufficient ability on the tape section should be made in accordance with the following specifications.

Item	Detail	Specification	Responsive component
Auto stop	The PRESSURE of the tape tight sensor (3).	0.88 ~ 1.23 ozs. (25 ~ 35 grams)	Coil spring (16)
Pinch roller	The PRESSURE of the Pinch roller (18).	2.8 ozs. (more than 80 grams)	Coil spring (6)
Head azimuth	"The obtainable output voltage," when the unit play back the test tape (6.3 kHz, Azimuth tape).	For the maximum output.	Screw (23)
Motor speed	"The output signal frequency," when the unit play back the test tape (3 kHz).	3 kHz	SVR601 in the Battery compartment.
Torque	Take up torque of the Tape winder	PLAY 0.4 – 0.83 ozs. inch (30 – 60 g.cm) F.FWD 0.4 – 0.83 ozs. inch (30 – 60 g.cm)	———
	Note: If any fails to meet the above specification, then clean the Drive belt, Flywheel, Motor pulley, Take up reel, and the related parts with a cotton swab soaked with alchole.		

SANYO CANADA INC.
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